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REMARKS

Claims 1-27 are currently pending in the subject application and are presently under consideration. A marked-up version of all pending claims is found at pages 2-7 of this Reply. Claim 1 has been amended herein.

In a telephone conversation on January 5, 2004, the Examiner agreed that the prior art of record does not teach, suggest, or disclose the aspect of a routing system that has an armature winding disposed therein to effectuate movement of a stage between paths within a junction. Applicants' representative thanks the Examiner for the courtesies extended during the conversation.

Favorable reconsideration of the subject patent application is respectfully requested in view of the comments and amendments herein.

**I. Rejection of Claims 1 and 2 Under 35 U.S.C. §102(b)**

Claims 1 and 2 stand rejected under 35 U.S.C. §102(b) as being anticipated by Murai *et al.* (U.S. 5,014,625). Withdrawal of this rejection is respectfully requested for at least the following reasons. Murai *et al.* does not disclose each and every element set forth in the subject claims.

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ 2d 1051, 1053 (Fed. Cir. 1987). "The identical invention must be shown in as complete detail as is contained in the...claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

The present invention relates to motors, and in particular to a path arrangement for a multi-track linear motor and a method of controlling movement of a stage between different tracks in a linear motor system. Independent claim 1 has been amended to recite, "A path for a linear motor, comprising: a *first path portion having a plurality of armature windings*; at least two branch path portions spaced in a direction of travel from the first path portion, *each of the at least two branch path portions including a plurality*

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*of armature windings; and a routing system that has at least one armature winding, positioned between the first path portion and the at least two branch path portions, the routing system effects movement of a stage between the first path portion and a selected branch path portion of the at least two branch path portions.*” Furthermore, “the routing system 810 includes a set of windings 818 and 820 associated with each of the branches 804 and 806. The first set of windings 818 provides a path that interconnects the path module 812 with the module 814 of the branch 804. Similarly, the second set of windings 820 interconnects the path module 812 with a module 816 of the branch 806. The windings in each set of windings 818 and 820 thus may be selectively energized to urge a stage between the main path 802 and a selected one of the branches 804 or 806.” (Page 43, line 31-page 44, line 5; Figure 28.) Thus, it can be seen that the plurality of armature windings employed by the present invention extends into the intersection (e.g. “routing system”) between paths to effectuate selective control of the directional motion of a stage.

The Examiner has indicated that “routing system” is interpreted as “any means for directing an object between alternate routes.” However, as is clearly set forth in independent claim 1, the routing system of the subject claim is a “routing system that has at least one armature winding” and, furthermore, is positioned *between* path portions. Thus, references describing routing systems that do not include armature windings therein do not read upon the subject claims. The routing system of the subject claims is a junction that utilizes selectively energized armature windings disposed within it to effect a magnetic field that can cause a stage to move in a specific direction. Applicants’ representative respectfully submits that the aspect of a “routing system that has at least one armature winding” is sufficient to overcome the cited reference, as Murai *et al.* does not disclose such aspects of independent claim 1.

Murai *et al.* discloses a system wherein inductive motors are employed to move a stage linearly only. Contrary to the Examiner’s assertions, Figure 18 of Murai *et al.* fails to describe a plurality of armature windings interposed at an intersection *between* paths (e.g., in the bridge itself) for selective control of stage motion as set forth in independent claim 1 and as supported by the specification, cited above. Murai *et al.* fails even to

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mention a routing system with *armature windings disposed therein in the intersection* of paths, but rather merely deals with minimizing the risk of a roller falling into a slit in the stage track. The Examiner points to "armature windings 157" in Murai *et al.*, which are disposed in the paths, but *not the routing junction* of a track. However, applicants' representative respectfully points out that the "primary member 57, 157" of Murai *et al.* is not an armature winding, but rather is a stator, or permanent magnet. Even so, the stators of Murai *et al.* are "*not provided in such a curved section 81, and consequently, no propelling force is provided to the conveyance body 86 at such a section.*" (Column 5, lines 9-11.) Thus, Murai *et al.* does not disclose the moveable routing system of the claimed invention.

In view of the foregoing, it is readily apparent that Murai *et al.* does not anticipate or make obvious the present invention as recited in independent claim 1 (and claim 2, which depends there from). Therefore, this rejection should be withdrawn.

## **II. Rejection of Claims 1 and 2 Under 35 U.S.C. §102(b)**

Claims 1 and 2 stand rejected under 35 U.S.C. §102(b) as being anticipated by Shimada *et al.* (U.S. 5,197,391). This rejection should be withdrawn for at least the following reasons. Shimada *et al.* does not disclose each and every element set forth in the subject claims.

Independent claim 1 has been amended to recite, "A path for a linear motor, comprising: a *first path portion having a plurality of armature windings*; at least two branch path portions spaced in a direction of travel from the first path portion, *each of the at least two branch path portions including a plurality of armature windings*, and a *routing system that has at least one armature winding, positioned between the first path portion and the at least two branch path portions*, the routing system effects movement of a stage *between the first path portion and a selected branch path portion of the at least two branch path portions.*" The amendment to claim 1 is supported by the specification at, for example, page 43, line 31-page 44, line 5: "*the routing system 810 includes a set of windings 818 and 820 associated with each of the branches 804 and 806. The first set of windings 818 provides a path that interconnects the path module*

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812 with the module 814 of the branch 804. Similarly, the second set of windings 820 interconnects the path module 812 with a module 816 of the branch 806. The windings in each set of windings 818 and 820 thus may be *selectively energized to urge a stage between the main path 802 and a selected one of the branches 804 or 806.*" (Page 43, line 31-page 44, line 5; Figure 28.) The plurality of armature windings employed by the present invention *extends into the intersection (e.g. "routing system") between paths to effectuate selective control of the directional motion of a stage.* Like Murai *et al.*, Shimada *et al.* does not disclose such aspects of independent claim 1.

Shimada *et al.* merely describes a system wherein a magnetically floating carrier system has a carriage body adapted to be floated by the attraction force of floating magnets acting upon the bottom surfaces of rails. Nowhere in the sections cited by the Examiner or otherwise does Shimada *et al.* even make mention of a plurality of armature windings that extend into an intersection of a routing system for selectively urging a stage through an intersection along a selected branch path.

In view of at least the above, it is respectfully submitted that Shimada *et al.* fails to anticipate or make obvious applicants' invention. Therefore, withdrawal of the rejection of independent claim 1 (and claim 2, which depends there from) is respectfully requested.

### **III. Rejection of Claims 3-5 Under 35 U.S.C. §103(a)**

Claims 3-5 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Shimada *et al.* in view of Japanese reference JP 03007003 A. Withdrawal of this rejection is requested for at least the following reasons. Neither Shimada *et al.* nor the Japanese reference, alone or in combination, teach or suggest each and every element set forth in the subject claims.

To reject claims in an application under §103, an examiner must establish a *prima facie* case of obviousness. A *prima facie* case of obviousness is established by a showing of three basic criteria. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to

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combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. See MPEP §706.02(j). The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. See *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Claims 3-5 depend from independent claim 1, which, in view of the above arguments, is not made obvious by Shimada *et al.* The Japanese reference fails to overcome the deficiencies of Shimada *et al.* with respect to claim 1, and claims 3-5, which depend there from. Specifically, the Japanese reference fails to teach or suggest a routing system that has armature windings in an intersection between a path and associated branch paths for selectively urging a stage through the intersection along a selected branch path.

In view of at least the above, the combination of Shimada *et al.* and the Japanese reference does not make obvious independent claim 1 (and claims 3-5, which depend there from). Therefore, this rejection should be withdrawn.

#### IV. Rejection of Claims 6-9, 11-17, and 19-27 Under 35 U.S.C. §103(a)

Claims 6-9, 11-17, and 19-27 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Shimada *et al.* as modified by Japanese reference '003 in view of Laurent *et al.* (U.S. 6,257,604) and Svensson (U.S. 5,845,581). This rejection should be withdrawn for at least the following reasons.

Independent claim 1 (from which claims 6-9 depend) recites "a routing system that has at least one armature winding, positioned between the first path portion and the at least two branch path portions, the routing system effects movement of a stage between the first path portion and a selected branch path portion of the at least two branch path portions." Similarly, independent claim 11 recites "a router interposed between the first path portion and the at least two branch path portions, the router has armature windings operative to effect movement of the stage between the first path portion and a selected one of the at least two branch path portions." Independent claims 20, 23, and 25 recite similar aspects of the invention.

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Laurent *et al.* and Svensson fail to overcome the deficiencies of Shimada *et al.* as modified by the Japanese reference with respect to the subject claims. None of the cited references teaches a *routing system with armature windings disposed therein* for effectuating movement of a stage across a junction or intersection. The Examiner contends that the limitation of armature windings in claim 11 is met by the electric motor taught by Laurent *et al.* However, employing armature windings in a rotational electric motor in an automobile suspension system does not teach or suggest disposing armature windings in a router (e.g., intersection between paths) in a linear motor to effectuate movement of a stage from one path to another. In this regard, there is no motivation to combine Laurent *et al.* with the other cited references.

Thus, the combination of Shimada *et al.*, the Japanese reference, Laurent *et al.* and Svensson does not make obvious independent claims 1, 11, 20, 23, and 25 (and claims 6-9, 12-17, 19, 21-22, 24, and 26-27, which depend respectively there from). Therefore, withdrawal of this rejection is respectfully requested.

**V. Rejection of Claim 10 Under 35 U.S.C. §103(a)**

Claim 10 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Shimada *et al.* as modified by Japanese reference '003 as applied to claim 3 and further in view of Hirtz, (U.S. 5,156,092 A). Withdrawal of this rejection is respectfully requested for at least the following reasons. Claim 10 is dependent from independent claim 1, which in view of the comments and amendments above, is not made obvious by the combination of Shimada *et al.* and the Japanese reference.

Hirtz fails to overcome the deficiencies of Shimada *et al.* and the Japanese reference with respect to independent claim 1. Specifically, Hirtz does not teach or suggest a routing system with *armature windings disposed in an intersection between paths* for selective energization to effectuate urging a stage through the intersection along a selected branch path.

Thus, the combination of Shimada *et al.*, the Japanese reference, and Hirtz fails to make obvious applicants' invention as set forth in independent claim 1, and claim 10 which depends there from. Therefore, it is respectfully submitted that this rejection

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should be withdrawn.

**VI. Rejection of Claim 18 Under 35 U.S.C. §103(a)**

Claim 18 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Shimada *et al.* as modified by Japanese reference '003, Svensson and Laurent *et al.* as applied to claim 11 and further in view of Hirtz (U.S. 5,156,092). It is respectfully requested that this rejection be withdrawn for at least the following reasons.

Claim 18 depends from independent claim 11, which in view of the comments above, is not made obvious by the combination of Shimada *et al.*, the Japanese reference, Svensson, and Laurent *et al.* Hirtz fails to make up for the deficiencies of the above-cited references with respect to claim 11. Therefore, this rejection should be withdrawn.

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CONCLUSION

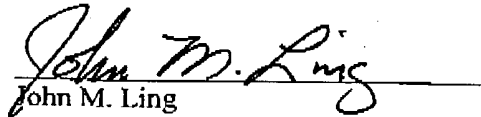
The present application is believed to be in condition for allowance in view of the above comments and amendments. A prompt action to such end is earnestly solicited.

In the event any fees are due in connection with this document, the Commissioner is authorized to charge those fees to Deposit Account No. 50-1063.

Should the Examiner believe a telephone interview would be helpful to expedite favorable prosecution, the Examiner is invited to contact applicants' undersigned representative at the telephone number listed below.

Respectfully submitted,

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